thereby a comparatively better ICI suppression as, for example, the Blackman window.

[0017] The number of pre-emphasized sub-carriers also basically can be extended to all sub-carriers, especially when the combination of doppler effect and phase noise is the limiting factor for the ICI.

[0018] Additional features and advantages of the present invention are described in, and will be apparent from, the following Detailed Description of the Invention and the Figures.

[0019] Additional features and advantages of the present invention are described in, and will be apparent from, the following Detailed Description of the Invention and the Figures.

BRIEF DESCRIPTION OF THE FIGURES

[0020] Figure 1 shows send-side modulation of OFDM symbols in accordance with the prior art.

[0021] Figure 2 shows send-side modulation of OFDM symbols in accordance with the inventive method.

Figures 3a to 3b

[0022] Figure 3a to 3c show diagrams of a simulation with a typical pre-emphasis function as well as a typical set of parameters.

DETAILED DESCRIPTION OF THE INVENTION

[0023] Figure 1a shows a schematic diagram of the send-side modulation method in accordance with the prior art or the structure of the transmitter to execute this known method. According to the prior art, each symbol pulse $S_{d(k)}$ of a kth carrier f_k for N sub-carriers of a symbol carrier band of the bandwidth B is modulated; i.e., for each symbol pulse $S_{d(k)}$ for a time window of length T an Inverse Fast Fourier Transformation (IFFT) in accordance with the formula

$$S_{d(k)} = \sum_{n=0}^{N-1} S_{d(n)} e^{j2\pi \frac{n}{N} k}$$

is applied and from it an OFDM symbol $S_{d(k)}$ is generated. To counteract echoes and/or synchronization errors, this OFDM symbol $S_{d(k)}$ with duration T, through which the window length of a corresponding Fourier analysis in the receiver is also provided with a guard time (i.e., the time T will be extended by a time T_g) usually

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